Biosensing Instrument

4500AP System Specifications

Base Station	Light source	670 nm dual light sources
	Detection speed	4 ms (> 200 data points per second)
	Incident angles	40-47 Deg (gas) 67-81 Deg (liquid)
	Baseline noise	~ 0.04 RU RMS (< 0.01 mDeg RMS)
	Baseline drift	0.30 RU/hour (0.05 mDeg/hour) (when ambient drifts < 1°C/hr)
	Temperature Control Range	6°C to 50°C (10°C below ambient temperature max)
	Outer dimension	355(w) x 250 (h) x 515 (d) mm
	Weight	11.5 kg
	Power supply	110-230 V 50/60 Hz
Fluid Handling	Number of sample flow channels	5 channels
	Flow cell material	PEEK (biologically compatible)
	Flow rate	1.0 to 250 µL/min (application dependent)
	Sample injection volume	>50 µL (application dependent)
	Sample injection methods	Fully automated (with Autosampler option) Semi-automated
	Kinetic constant	$k_a < 1 \times 10^8\ M^{-1}s^{-1}$ $k_d > 1 \times 10^{-6}\ s^{-1}$
	Dissociation constant	$K_D = 10^{-3}$ M (1 mM) to 10^{-12} M (1 pM)
	Molecular weight cutoff	100 Da
	Analysis Modules	5-channel BI-DirectFlow™ module (installed) Option: EC SPR module and Gas SPR module
Control System	Computer	Windows operating system
	Software	includes: Real-time contral SPR software Data Analysis software Kinetics Analysis software
Autosampler	Sample capacity	Up to 768 samples with various vial tray size including 2 x SBS standards (384 / 96), 2 x 48 Vials (1.5mL), 2 x 12 Vials (10mL)
	injection volume	20uL to sample loop volume (1500uL)
	Sample cooling	Minimum: 4°C +/- 2°C
	Outer dimension	300 (w) x 575 (h) x 360 (d) mm
	Weight	21 kg
PP-100 Auto buffer exchange pump	Buffer exchange	Automatic buffer exchange up to 6 buffer sources
	Buffer degasser	In-line
	Buffer delivery	Continuous
	Outer dimension	305 (w) x 191 (h) x 330 (d) mm
	Weight	6.8 kg

Product specificaiton and descriptions in this document are subject to change without notice. (December 2022)

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